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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,099	03/22/2001	Masanori Ikari	010270	2044

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EXAMINER

NGUYEN, THU V

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/814,099

Applicant(s)

IKARI, MASANORI

Examiner

Thu Nguyen

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 4-10 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3,12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/22/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

[Handwritten signature]

DETAILED ACTION

The amendment filed on February 4, 2005 has been entered. By this amendment, claims 4-10 have been withdrawn from consideration. All claims 1-13 are now pending in the application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 20-22, the added limitation "an operating amount change judging portion ... to zero amount" does not appear to have any connection and does not seem to provide any significant function to other elements in the claim. It is not clear how the result from the operating amount change judging portion be used or processed by other elements.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanamoto et al (US 5,356,259).

As per claim 1, Hanamoto teaches a working unit control apparatus of an excavating and loading machine in which a controller outputting a boom control command value to the boom control valve on the basis of the boom lever operating amount and a bucket control command value on the basis of the bucket lever operating amount (col.13, lines 38-53; col.14, lines 19-66); Hanamoto further teaches a load judging portion (col.16, lines 39-40, lines 42-47), and starting excavation when boom lever is operated and the load judging portion judges that the vehicle is under excavation (col.9, lines 20-37, lines 23-25; col.16, lines 42-61). Moreover, since Hanamoto teaches a hydraulic working unit (fig.2), Hanamoto obviously teaches the well known boom cylinder, boom control valve, boom lever, boom lever operating amount detector, bucket cylinder, bucket control valve; bucket lever, bucket lever operating amount detector that are well known to be included in the hydraulic working machine as claimed. Hanamoto does not explicitly teach an excavating state detecting means, and does not explicitly disclose an operating amount change judging portion for judging on the basis that the boom lever operating amount changes from a predetermined operating amount to a zero amount. However, since Hanamoto teaches the capability to recognize the user operation on the pedal 10 (fig.1) for automatic excavating mode (col.16, lines 39-42) and detecting the start of excavation when the pump pressure has exceed a value J (col.16, lines 42-46), and since including a means (specifically, sensors) for detecting the level of operation on the pedal or the pressure of the pump would have

been known, connecting the sensors to the controller that determines start of excavation based on the data from sensors reporting the operation of the pedal and the pressure of the pump in order to determine excavation state of the vehicle would have been obvious to a person of ordinary skill in the art at the time the invention was made. Furthermore, since Hanamoto teaches detecting the direction and operation amount of the boom operation lever (col.13, lines 43-45), Hanamoto obviously encompasses teaching the capability of judging the boom lever operating amount from a predetermined operating amount to a zero amount when the boom lever changes for an operating amount to zero.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanamoto et al (US 5,356,259) in view of Igarashi et al (US 4,332,517).

As per claim 11, refer to claim 1. Moreover, Igarashi teaches outputting an automatic excavation command value (y) based on the judgment that the vehicle is under excavation (col.4, lines 66-68; col.7, lines 23-26), and the judgment that the operating amount (Eb) changes from a value to zero (Eb = 0 in col.7, line 24) (col.7, lines 20-26). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide automatic excavation control to the vehicle of Hanamoto when the vehicle is under excavation and the boom lever changes to zero as taught by Igarashi in order to provide the capability to perform horizontal excavation as taught by Igarashi in col.7, lines 23-26.

Allowable Subject Matter

6. Claims 2-3, 12-13 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Prior art of record does not disclose a working unit control apparatus of an excavating and loading machine set forth claims 2-3, 12-13. Specifically, prior arts of record does not teach a working machine having an excavating state detecting means that is constituted by a vehicle speed detector and engine rotational speed detector, and a load judging portion the judges that the vehicle is under excavation when the vehicle speed is equal to or less than a value shown by a predetermined curve relating to the engine rotational speed. Further, prior art of record does not disclose an excavating machine having an excavating state detecting means that is constituted by an accelerator pedal operating amount detector that detects an accelerator pedal operating amount, and an engine rotational speed detector that detects an engine rotational speed; and a load judging portion that judges that the vehicle is under excavation when the accelerator pedal operating amount is equal to or more than a predetermined operating amount and the engine rotational speed is equal to or less than a predetermined rotational speed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

In response to applicant's argument on page 18, second paragraph, claims 1 and 11 do not actually claim the how the excavating state detecting means detect the moment to start excavation. Since Hanamoto teaches detecting excavation when the operation pedal is trodden as pointed out by the applicant, Hanamoto obviously teach one method for detecting start of the excavation.

In response to applicant's argument on page 19, although claim 1 claims the operating amount change judging portion that judges that the boom lever operating amount changes from a predetermined operating amount to a zero amount, claim 1 does not claim that the judging is utilized for starting automatic excavation control.

Claim 11 was previously allowed. However, in view of the newly found reference Igarashi et al (US 4,332,517), the allowance of claim 11 is herein withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (571) 272-6967. The examiner can normally be reached on T-F (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 7, 2005



THU V. NGUYEN
PRIMARY EXAMINER